

Hearing Aid and Digital Wireless Phones Compatibility

Summary of Meeting

July 2, 2001

In Attendance: Ron Barnes - Cellular Telecommunications & Internet Association (“CTIA”), Steve Berger - TEM Consulting & Co-chair of ANSI C63.19 Working Group, Tim Creagan - Self Help for the Hard of Hearing (“SHHH”), John Flanders - Alexander Graham Bell Association for the Deaf (“AG Bell”), Linda Kozma-Spytek - Gallaudet University, Pam Ransom - Common Ground Solutions, Donna Sorkin – AG Bell, Andrea Williams - CTIA, Beth Wilson – SHHH; David Woodbury - Hearing Industry Association (HIA) .

The meeting was hosted by CTIA at its offices in Washington, D.C. with Pam Ransom and Beth Wilson attending via telephone conference. Andrea Williams called the meeting to order and provided a brief overview of the six-year effort by the stakeholders to address the issues of compatibility and interference between hearing aids and digital wireless phones. The purpose of the meeting was to discuss in further detail the current status of ANSI C63.19 standard, potential technical solutions to the compatibility and interference issues, and whether the stakeholders could reach consensus regarding education and outreach efforts with respect to implementation of the ANSI C63.19 standard.

Current Status of ANSI C63.19 Standard

Steve Berger reported that the ANSI C63.19 standard has been approved, and IEEE is in the process of publishing it. He provided a brief explanation of the standard and how it measures the immunity level and interference between hearing aids and digital wireless phones. There was discussion regarding the functionality of the standard in terms of both the technical parameters and its general applicability for users. Everyone agreed that both wireless and hearing aid manufacturers must work together to resolve implementation issues if consumers are to benefit.

Andrea Williams explained that the wireless industry was cautious about implementing the standard. She noted that such implementation requires wireless companies, both manufacturers and carriers, to expend significant resources and manpower, which have been substantially reduced as a result of the economic downturn. While CTIA wishes to move forward with implementation of the ANSI C63.19 standard into its certification program, it is reluctant to do so if there is little or no commitment from the various hearing aid manufacturers to implement the standard concurrently. Ron Barnes emphasized the importance of both the hearing aid and wireless industry to continue to work together with respect to coordinating the implementation phase of the standard. Several participants agreed that unless both industries are implementing the standard at the same time, the standard is virtually useless for consumers. Even if the wireless industry implemented the standard and provided consumers with the relevant immunity level of the digital wireless phone, the number is meaningless unless there is a corresponding number for the hearing aid. CTIA acknowledged that its members were very concerned about moving forward until they had a very clear sense on whether hearing aid manufacturers would concurrently implement the standard.

David Woodbury indicated that while HIA appreciates the wireless industry's concerns regarding implementation, hearing aid manufacturers were experiencing test problems with the ANSI C63.19 standard. Apparently, several hearing aid manufacturers have encountered problems with the repeatability of test results using the standard among individual hearing aids within a product or model line. Several hearing aid manufacturers have conducted tests using the standard to measure the immunity level between a specific digital wireless phone and a specific hearing aid within a product or model line. According to David, each time they conduct the test, the result is a different level of immunity. David indicated that unless the tests can be repeated successfully with consistent test results, HIA members are not inclined to implement the standard as it exists or label their products accordingly. He noted that they do not want to be in a position of making claims to consumers regarding the immunity level of hearing aids when there is such uncertainty. This would only lead to customer confusion. He also suggested that more studies needed to be done before hearing aid manufacturers would feel comfortable in making certain claims or labeling their products with respect to their immunity level with digital wireless phones. HIA has met with FDA staff regarding the repeatability and labeling issues. According to David, FDA staff has acknowledged HIA's position and concerns, and there is no immediate plan by the FDA to impose labeling requirements on hearing aids with respect to their immunity level with digital wireless phones.

In response, Steve Berger noted that the validation study for the standard demonstrated that the standard proved to help 96 percent of the consumers to accurately match phones to hearing aids and in some cases went beyond consumer expectations. Steve Berger noted that HIA, FDA and the FCC voted in favor of the standard during the balloting process. David Woodbury indicated that HIA voted in favor of the standard with the understanding that the ANSI C63.19 working group would continue to refine the standard. In addition, several participants noted that some hearing aid manufacturers are already advertising hearing aids with high immunity to RF. David was surprised by this statement, and indicated that the CEOs of the hearing aid companies had recently voted unanimously to make no claims on immunity while they dealt with the repeatability problem.

David agreed that a concerted educational effort targeted at consumers, audiologists, sales and marketing representatives in the wireless industry is a better short-term solution than implementation of the existing standard. He noted that a subgroup of the ANSI C63.19 working group are planning to meet in late August/early September to discuss the parameters for additional testing in the United States and Europe as well as global harmonization of the U.S. ANSI C63.19 with the European standard.

Upon request, Steve Berger explained briefly the difference between the U.S. and European standards. The ANSI C63.19 standard takes into account "near-field" emission and the susceptibility of wireless phones and hearing aids respectively. It is a user-related testing. The European community has also been working on an IEC standard. While both standards are considered a "user standard," the European standard uses a far-field measurement (GTEM) rather than a near-field measurement.

There was discussion regarding global harmonization of these standards before moving forward with implementation in the United States, *i.e.*, the impact on hearing aid manufacturers

that sell their products both in Europe and the United States, the length of time such harmonization efforts would take, the impact on U.S. hearing aid consumers, and the impact on wireless phone manufacturers. Steve confirmed that a subgroup of the ANSI C63.19 working group will be meeting in late August/early September to discuss this matter. Both David and Steve estimated that such efforts generally take 6 to 12 months, but they would have a better sense of the time frame after the subgroup meets. Steve Berger agreed to report back to the group.

Potential Solutions

Representatives of AG Bell, SHHH and Gallaudet University expressed their grave concern and discontent with the slow rate of progress they believe has been made to date on this issue. They stated that the wireless industry has been less than forthcoming on disclosing the changes, if any, that have been made to digital wireless phones to address the interference issue. They also noted that while consumer groups remain committed to working with the hearing aid and wireless industries on this issue, they are discouraged by the lack of what they would consider meaningful progress.

There was considerable discussion regarding existing and potential solutions. David Woodbury indicated that hearing aid manufacturers currently are addressing the interference issue on a case-by-case basis. Specifically, if the consumer is experiencing interference between the hearing aid and the digital wireless phone, he or she can return the hearing aid to the manufacturer for an adjustment. David stated that such adjustment very often involves increasing the immunity level of the hearing aid, either through shielding or a decoupling technique. While the “case-by-case” approach is an option available to consumers, several participants agreed that such an approach provides only a short-term solution to the problem.

CTIA stated that the ANSI C63.19 standard is another viable solution provided that both the wireless and hearing aid industries implement the standard concurrently. While CTIA indicated that accessories such as the neck-loop set are available and should be considered as a potential solution, Donna Sorkin strongly disagreed. She explained that such accessories require a t-coil in the hearing aid, and only 20% of hearing aid wearers have t-coils in their hearing aids. Thus, a neck-loop accessory resolves the problem for a small minority of hearing aid wearers. She also noted that some consumers find the neck-loop difficult to use, inconvenient, and ineffective. She suggested that the neck-loop set should not be considered a long-term solution, and should be considered as a short-term solution for only 20% of hearing aid wearers.

Andrea Williams suggested that consumers who wear hearing aids or have cochlear implants should have a range of choices with respect to solutions, and that this group should not limit the range to a “one size fits all” approach. She explained that while each solution alone may not serve all hearing aid wearers, perhaps with a combination of solutions a substantial majority of individuals who are hard of hearing could access a digital wireless phone with very little or no interference. Andrea stated that while she appreciated AG Bell’s and SHHH’s position on such accessories, she strongly recommended that the group consider a combination of the ANSI C63.19 standard as well as neck-loop accessories as viable options for consumers. Both Andrea and Ron indicated that they would also reiterate to CTIA’s members that consumers

view the neck-loop accessory as a short-term solution for a limited number of hearing aid wearers and have a strong preference for a technical solution built into the phone.

Linda Kozma-Spytek noted that there are some digital wireless phones in the market that work well with certain hearing aids. She indicated that Gallaudet University has work with a number of phone manufacturers conducting user and field tests so they know that the industry is working on the issue. David also noted that phone manufacturers have and continue to work with hearing aid manufacturers in developing technical solutions. The consumer participants noted that the wireless industry has been unforthcoming with specific information as to what steps individual manufacturers are taking to develop a technical solution within the phone design and components. CTIA explained that wireless phone manufacturers generally are unwilling to share such information, because it is proprietary and competitive information. Such information generally is not even shared with CTIA staff, except under very limited circumstances, *i.e.*, CTIA Certification Program, which is subject to very stringent non-disclosure agreements, including limited access.

John Flanders noted that most consumers are not concerned with the complex technical issues and legal issues regarding confidentiality. They just want to know what digital wireless phone works with their particular hearing aids. Representatives from AG Bell, SHHH and Gallaudet University agreed that more information from the wireless industry would be very helpful. Linda noted that while consumers are strongly encouraged to “test drive” the digital wireless phone with their individual hearing aids, such “test drives” do not always provide sufficient information, knowledgeable staff, or an opportunity to try the phone with the hearing aid on a “live” network. The consumer participants also raised the issue regarding wireless carriers offering a trial period so that consumers could determine whether the digital wireless phone is compatible with their individual hearing aids. Ron Barnes noted some carriers have already implemented trial periods for consumers and that often this is a business decision on the part of a wireless carrier.

CTIA’s representatives expressed their appreciation for the feedback and dialogue regarding potential solutions. They agreed to raise these issues with their members, particularly the issue of sharing more information, proprietary and non-proprietary information, with consumers. Andrea suggested that the consumer organizations consider whether they would be amenable to signing non-disclosure agreements. CTIA’s representatives also indicated that it would convey to their members that while the hearing aid manufacturer’s case-by-case approach, the use of accessories, and the implementation of the ASNI C63.19 standard are viable options, consumers feel strongly that such options do not solve the problem. They are, at best, short-term solutions, and they continue to have a strong preference for a long-term solution that will provide a “fix” in the phone. CTIA representatives also stated that they would ask the more specific question, “How do I get a hearing aid and a phone to work together?”

Educational Efforts

All the participants agreed that education and outreach are critical and much needed. There was consensus that all the stakeholders should take responsibility for educating their respective constituents, *i.e.*, consumers, audiologists, marketing and sales representatives,

customer care personnel, and should work cooperatively to develop an outreach program that educate consumers not only about the issue, but also what wireless services and products provide individuals who are hard of hearing with access to the digital wireless services. CTIA indicated that it has already started working on the educational aspect of this issue and has hired Pam Ransom, Common Ground Solutions, to assist in the development of the wireless industry's education and outreach program. Ron Barnes noted that CTIA will also ask HIA and consumer organizations to help CTIA reach their respective constituents.

Other Issues

Linda noted that the FCC is considering whether to repeal its requirement for cellular carriers to provide analog service. Everyone acknowledged that the wireless industry is moving to digital technology far more quickly than it had anticipated just three years ago. Consumers also understand the technical reasons for the swift deployment of digital technology, *i.e.*, spectrum shortage, more efficient use of spectrum, capacity, etc. However, Linda stated that until digital wireless services are accessible to individuals who are deaf and hard of hearing, analog service needs to remain accessible. She asked whether CTIA has taken a position on this issue, particularly in view of its work with the TTY Forum and the hearing aid compatibility issue still outstanding.

Andrea Williams stated that CTIA's Board has taken a position wherein it supports removal of the analog requirement for cellular providers since there is no similar requirement imposed on PCS providers. However, CTIA's Board has acknowledged that there must be a sunset period for the requirement in order to provide carriers with ample time to transition certain customers to digital technology, including TTY users, hearing aid users, roamers, etc. Andrea Williams assured the stakeholders that even if the FCC eliminates the analog requirement, the elimination of the regulatory requirement does not mean that cellular service providers will abandon their analog customers. Ron Barnes noted that the natural evolution of both hearing aids and digital wireless phones will alleviate some of the existing problems with interference.

Representatives from SHHH, AG Bell and Gallaudet University indicated that their organizations would actively oppose the FCC's proposal to eliminate its analog requirement for cellular service providers until digital wireless services are commercially available for all deaf and hard of hearing consumers. SHHH's and Gallaudet University's representatives emphasized that they did not oppose digital wireless technology, and made it clear that they strongly support access to digital wireless technology for individuals who are deaf or hard of hearing. They acknowledged that digital technology has so much to offer. Andrea Williams also emphasized that the wireless industry want to bring individuals who are deaf or hard hearing into the 21st century and want them to be able to access and use digital wireless technology. She stated that the wireless industry opposes "technology ghettoizing" a segment of the population, and remains very committed to providing access to wireless services and products to all Americans.

Viable Course of Action

The group agreed that for now the following is a viable course of action:

- Hearing aid and wireless phone manufacturers will voluntarily participate in the upcoming subgroup meeting of the ANSI C63.19 working group to determine whether it is feasible to conduct additional testing on the ANSI C63.19 standard in view of the repeatability problem and the issue of harmonization of the ANSI C63.19 standard with the European standard. While it has been estimated that this effort may take six to 12 months, Steve Berger has agreed to report back to the group with a more definitive time frame from the ANSI C63.19 subgroup. In the meantime, hearing aid manufacturers do not plan to implement the ANSI C63.19 standard as it currently exists and do not plan to label their products in accordance with the ANSI C63.19 standard as it currently exists. Individual hearing aid manufacturers may voluntarily chose to implement the ANSI C63.19 standard as it currently exists. If so, they will notify consumers and wireless phone manufacturers of their intentions.
- Hearing aid manufacturers will continue to address hearing aid and digital wireless phone interference on a case-by-case basis by allowing their customers to return their hearing aids to the manufacturer for adjustment in the immunity level of the aid.
- Until there is a definitive answer as to when or if hearing aid manufacturers plan to implement the ANSI C63.19 standard or its progeny, wireless phone manufacturers and carriers cannot move forward with any plans to implement the standard. The parties agree that both industries must implement ANSI C63.19 standard concurrently if the standard is to be useful to the consumer. Accordingly, the wireless industry and the CTIA Certification Program will hold implementation efforts in abeyance. During this period, wireless phone manufacturers do not plan to label their products in accordance with the ANSI C63.19 standard as it currently exists. Individual phone manufacturers may voluntarily chose to implement the ANSI C63.19 standard as it currently exists with the understanding there are no guarantees that hearing aid manufacturers may undertake a similar effort.
- Accessories such as the neck-loop set may be a viable option for some consumers who wear hearing aids equipped with t-coil and who are not averse to using such accessories to access digital wireless services. Wireless service providers and manufacturers will continue to offer such accessories to these consumers. SHHH, AG Bell and Gallaudet University do not advocate the use of such accessories with hearing aids equipped with or without t-coils as a permanent solution. They view such accessories as a short-term or interim solution and may not support the use of such accessories by their constituents.

- The ANSI C63.19 as it currently exists is a viable option for hearing aid wearers in the United States, provided that the repeatability issue can be resolved quickly and hearing aid manufacturers are willing to implement the standard concurrently with wireless phone manufacturers.
- CTIA will retain the hearing aid compatibility provision in its certification program and reevaluate its status when there is a definitive answer with respect to when or if hearing aid manufacturers plan to implement the standard or its progeny.
- The participants unanimously agreed that on-going education and outreach efforts are much needed and that in order to maximize the benefits of such efforts, the participants should coordinate their efforts. The participants also reached a consensus that such education and outreach programs should target primarily audiologists, customer care, sales and marketing personnel, and consumers. While each participant will determine the scope and media of their education and outreach programs, there was agreement that some participants may want to partner or combined their efforts in order to maximize resources and targeted audience
- CTIA agreed that it will revisit the issue of “more information” with its member companies and convey the concerns raised by consumers with respect to solutions, phone manufacturers’ sharing proprietary and competitive information regarding changes in the phone to address the interference and compatibility issues, consumer interest in trial periods in order to determine whether their hearing aid works with a phone, and responding to consumer question regarding “what phone works with my hearing aid.”
- CTIA will convey to its membership that service providers offering “trial periods” to enable consumers to test the compatibility of their hearing aids with a digital wireless phone would be very beneficial.
- The group will provide the FCC with a copy of the summary of the minutes from this meeting.
- The next meeting of this group will be scheduled for the Fall 2001.

Respectfully submitted,

Andrea D. Williams